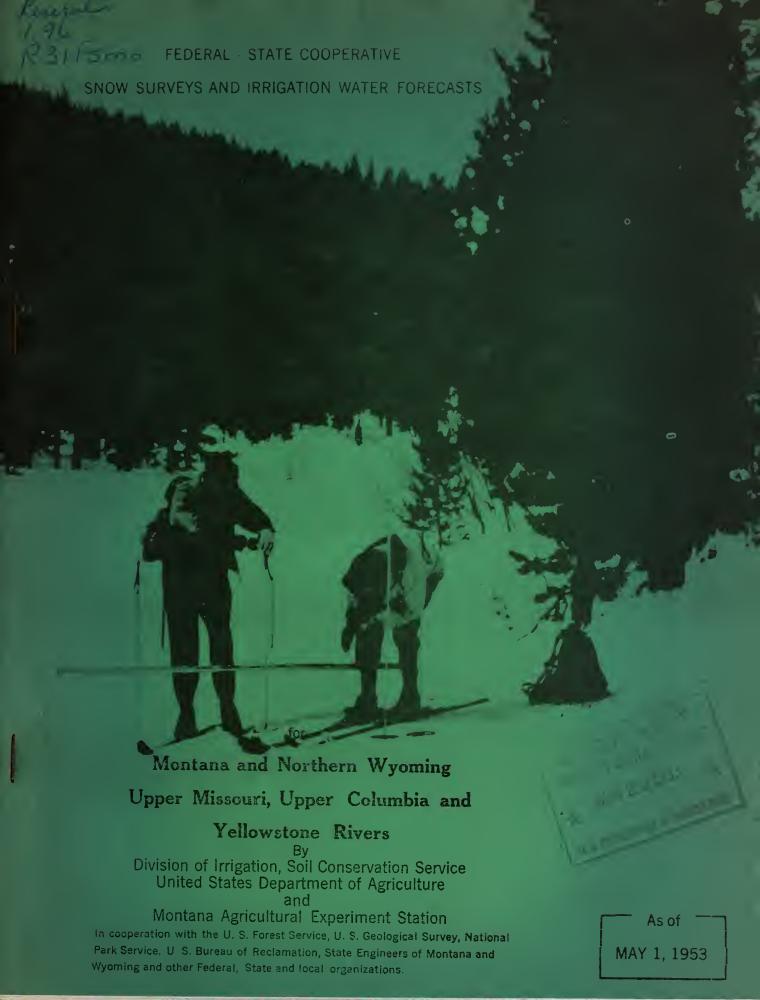
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## UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY AND WATER SUPPLY FORECAST REPORTS:

Forecasts by U. S. Weather Bureau of total annual streamflow October-September, inclusive, at more than 300 gaging stations are issued monthly January through May in the publication WATER SUPPLY FORECASTS FOR THE WESTERN UNITED STATES.

Weather Bureau forecasts of runoff presented in this bulletin are computed from procedures based on mathematical analysis of the relation between precipitation and runoff.

The Weather Bureau bulletins may be secured by writing to:

Hydrologist in Charge River Forecast Center U. S. Weather Bureau 712 Federal Office Building Kansas City 6, Missouri

### FEDERAL-STATE COOPERATIVE SNOW SURVEYS

AND

IRRIGATION WATER FORECASTS

FOR

MONTANA AND NORTHERN WYOMING

Upper Missouri and Upper Columbia River
Basins

Report Prepared by

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and

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> > and

Montana Agricultural Experiment Station Bozeman, Montana



### IRRIGATION WATER SUPPLY OUTLOOK FOR SEASON 1953 AS OF MAY 1, 1953

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Snow survey measurements made on or about May 1st over the Upper Missouri Basin indicate that the water supply for the irrigation season for 1953 is FAIR to GOOD. The snow pack at this time is rather large when compared to an average consisting of 20 years' record.

Due to the dry fall and mild winter temperatures, a considerable portion of the snow pack is disappearing into the sub-soil. A good portion of the low elevation snow has disappeared, leaving a rather small area of the water shed covered with a relatively deep snow pack. Those irrigation projects under regulated reservoirs will have a good supply this season, while those under unregulated streams will need supplemental water for late July and August irrigation.

The snow pack over the Upper Columbia Basin in Montana has increased considerably during April, and some of the courses have more water content on May 1st than was evident during the last of March. Valley precipitation stations indicated a definite plus departure from normal over most of this basin which necessitated raising the forecast of seasonal volume flow. Reservoir storage is approximately average for this time of year. Antecedent stream flow has been close to median in general, with a few points showing a definite belowmedian trend.

JEFFERSON RIVER: Only a few snow survey courses are measured in the Jefferson River Basin on May 1st which indicates a rather normal situation in that basin. The forecast for this basin was not raised over the April figures.

MADISON RIVER: On the Madison River, the May 1st snow surveys showed a little better than average conditions for May 1st. The snow line is remarkably high, and the area to contribute to runoff will be relatively smaller than last season, even though we have a large water content in the higher elevations.

GALLATIN RIVER: Snow survey measurements made on May 1st indicate relatively the same trend as those on the Madison. The river forecasts for these two streams were raised slightly over the April 1st figure.

MISSOURI RIVER MAIN STEM: The Missouri River main stem below Three Forks will carry a good supply of water during the coming season. The water content on the snow survey courses above Helena and at Marias Pass indicate a good water content, although a very high snow line. Stream flow forecasts at Toston and Fort Benton have been raised slightly due to a plus departure in precipitation over this basin.



UPPER YELLOWSTONE RIVER: The snow pack in Yellowstone Park on May 1st is good for this time of year, although not as high in percentage of average as snow survey courses further west in the Missouri Basin. The stream flow at Corwin Springs for April-September was raised approximately 300,000 acre feet. It is now anticipated that approximately 2,000,000 acre feet will pass that station between April 1st and September 30th.

LOWER YELLOWSTONE RIVER (In Wyoming): The snow pack on the Popo Agie River on April 1st was slightly below average, and it is anticipated that there will be an early runoff of rather a small volume. The forecasts for the Popo Agie are approximately the same as April 1st, due to a plus departure from normal of precipitation over most of the basin. It is anticipated that above normal precipitation during May and June will produce about normal runoff conditions.

WIND RIVER: May 1st snow surveys made on the Wind River Basin above Dubois indicate a fair water supply during April-September from this stream. Revised forecasts would indicate approximately 110% of average flow at Riverton.

COLUMBIA RIVER BASIN: The 1953 snow pack as measured on May 1st in the Flathead Basin has increased at some stations, while the snow line has raised in elevation. The basin now contains a good water supply, and with normal May and June temperatures and precipitation, should yield approximately 6,189,000 acrefect of water from April 1st through September, or 110% of average. Although the snow line on the South Fork of the Flathead is relatively high, it is anticipated that 2,295,000 acrefect of water will be available to Hungry Horse Dam between April 1st and September 30th, or 110% average.

The Clark's Fork drainage received an above average precipitation during April, and the river forecasts were raised slightly to meet this condition. It is now anticipated that the Clark's Fork below Missoula will flow approximately 110% of average, and the combined rivers at Plains will flow approximately 113% of average during the April-September period.



May 1, 1953

### FORECAST OF SEASONAL STREAM FLOW

		Seasonal Str	eam Flow	in Thou	sands of	acre feet
UPPER MISSOURI RIVER		FORECAST-1953	% A-S			
IN MONTANA		April - Sept.	10-Yr.		Sept.	
			Avg.		1951	141-150
					-//-	
RED ROCK RIVER	i					
Kenedy Ranch (at)		74.4	120	**		62
	1)	95.9	112	_	-	86
BEAVERHEAD RIVER						
Barratts, Montana		193	97	222	170	198
BIGHOLE RIVER						!
Melrose (near)		789	101	_	861	781 :
JEFFERSON RIVER						
Sappington (at)		984	86	-	1,1//	1.134
MADISON RIVER						
West Yellowstone (near)		195	98	2Li8	234	199
	2)	412	98	-	**	419
	3)	763	104	-	-	733
GALIATIN RIVER						
Gateway (near)		435	96	596	399	
Hyalite Creek		33.6	92	41.0		7 36.7
Logan (at)		455	93	745	412	491
MISSCURI RIVER						
Tos ton (at)		2,208		2,825	2,217	
Fort Benton (at)		3 <b>,</b> 298	94		4,072	
Loma		3 <b>,</b> 810	91	ees.	5,162	
Zortman		4,090	90	cath	5.524	4.564
SUM RIVER						
	5)	366	91		-	401
MARIAS RIVER		111				-1.5
Shelby (st)		44	81	-	-	545
Brinkman (near)		<u>LV15</u>	81		-	549
JUDITH RIVER		-1		1.0		
Utica (near)		3/4	77	48 -	40	114
YELLOWSTONE RIVER		0.000		0.001	0.05	. 050
Corwin Springs (at)		2,000		2,184	2,254	
Livingston (near)		2,319	107	-	2,474	2,166
Billings (at)		3,965		4,642	4,469	4,16/
Miles City (at)		6,617		6,264	7,237	6,774
Sidne y (near) SHIELDS RIVER		6,941	97	-	7,063	19000
		1.7.0	00		70	0 1.1
Wilsall (near)		43.2	98		32.	2 14
CLARK FORK RIVER		<b>500</b>	00		775	FOO
Chance (at)		<b>52</b> 0	88	133	731	589
Edgar (at)		556	88	613	766	630

<sup>(1)</sup> Observed flow plus change in stor age in Lima Reservoir

<sup>(2)</sup> Observed flow plus change in storage in Hebgen Lake
(3) Observed flow plus change in storage in Hebgen and Ennis Lakes
(5) Observed flow plus change in storage in Gibson, Willow Creek & Pishkun Res.
(\*) Preliminary data furnished by U.S. Geological Survey, subject to revision.



May 1, 1953 FORECAST OF SEASONAL STREAM FLOW

	Seasonal St				
YELLOWSTONE RIVER TRIBUTARIES	FORECAST-1953	% A-S	Measure	d runoff	10-Yr.
IN WYOMING	April - Sept.	10-Yr.	April	- Sept.	Avg.A-S
		Avg.	1952	1951	141-150
					-
WIND RIVER	11.0				E-71
Riverton (at) (6)	640	110	•	-	534
BIG HORN RIVER	0/0	0.5			
Thermopolis, (at) (7)	960	95	-	2 521	1,011
Kane, (at)	1,394	94	-	1,514	1,475
St. Xavier (near) (8)	2,192	98	<b>62</b>	2,365	2,232
BULL LAKE CREEK		0=			000
Bull Lake (Above)	171	85		-	202
Lenor (near) (9)	<b>1</b> 59	83		-	192
POPO AGIE RIVER	4.				
Riverton (near)	369	98		-	375
NORTH FORK POPO AGIE RIVER		,			
Lander (near)	72	96		87	75
LITTLE POPO AGIE RIVER					
Hudson (at)	57	100	-	-	57
GREYBULL RIVER					
Meeteetse (at)	208	87		-	238
Basin (near)	99	85		-	122
SHOSHONE RIVER					
Buffalo Bill Dam (below) (10)	811	103		862	785
Byron (at) (10)	674	112		691	601
TONGUE RIVER					
Dayton (near)	111	97	·	108	114
Acme (near)	265	106		206	250
Decker (near) Montana (11)	271	98		210	276
POWDER RIVER	•				
Arvado (at)	163	98		59	165
Moorehead (at)Montana	298	95		117	313
Locate (at) Montana	366	94		150	390
MIDDLE FORK POWDER RIVER					
Kaycee (near)	73	90		50.	81
NORTH FORK POWDER RIVER					
Mayoworth (near)	18.8	94		12	20
CLEAR CREEK					
Buffalo (near)	38.9	97		26	110
Arvado (near)	119	90		53.1	1
				1 77 0-	

<sup>(6)</sup> Observed flow plus Storage in Bull Lake and Pilot Butte Reservoirs (7) Observed flow plus Storage in Boysen Reservoir

<sup>(8)</sup> Observed flow plus Storage in Boysen and Buffalo Bill Reservoirs (9) Observed flow plus Storage in Bull Lake Reservoir

<sup>(10)</sup> Observed flow plus Storage in Buffalo Bill Reservoir

<sup>(11)</sup>Observed flow plus Storage in Tongue Reservoir (\*) Preliminary data furnished by U.S. Geological Survey subject to revision.



May 1, 1953 FORECAST OF SEASONAL STREAM FLOW

	,					
	Seas	onal Stre	amflow	in Thou	sands of a	cre feet
UPPER COLUMBIA RIVER		ST 1953			ed runoff	10-Yr.
IN MONTANA	April-				- Sept.*	Avg.A-S
	Sept.	July	Avg.	1952	1951	141-150
OLADY BODY DIVED						
CLARK FORK RIVER Bonner (above) (3)	896	810	115	_	941	781
Missoula (above)	1780	1619	109	1.782	2369	1631
Missoula (below)	3363	3087	110	3268	4127	3044
St. Regis (at)	4486	4146		4318	5492	4042
Plains (near) (4)	12314	11341	113	9421	13302	10869
Cabinet Gorge (at) (4)	13822	12734	113	-	15178	12297
BLACKFOOT RIVER						
Bonner (near)	884	806	104	-	1295	851
BITTERROOT RIVER						
Darby (near)	609	571	110	608	663	544
At Mouth (6)	1583	371	112	1362	1618	1413
AU MOUGH	1000	_	112	1002	1010	1110
FLATHEAD RIVER						
Columbia Falls (near) No. Fk.	1754	1606	103	-	2396	1705
Columbia Falls (at) (7)	6189	5583	110	7224	5722	5604
Polson (near) (4)	7441	6843	112	4993	6363	6621
MIDDIREONV BY AMURAD DIVIDE						
MIDDLEFORK FLATHEAD RIVER West Glacier (near)	1813	1697	108		2138	1664
nest diagrer (near)	1919	1097	108	-	2135	1004
SOUTH FORK FLATHEAD RIVER						
Columbia Falls (near)(7)	2295	2150	110	2058	2511	2091

<sup>(3)</sup> Difference in observed flow, Clark Fork above Missoula and Blackfoot at Bonner.

<sup>(4)</sup> Observed flow plus change in storage in Flathead Lake and Hungry Horse Res.

<sup>(6)</sup> Difference in observed flow, Clark Fork above and below Missoula.

<sup>(7)</sup> Observed flow plus change in storage in Hungry Horse Reservoir.
(\*) Preliminary data furnished by U.S. Geological Survey, subject to correction.



S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

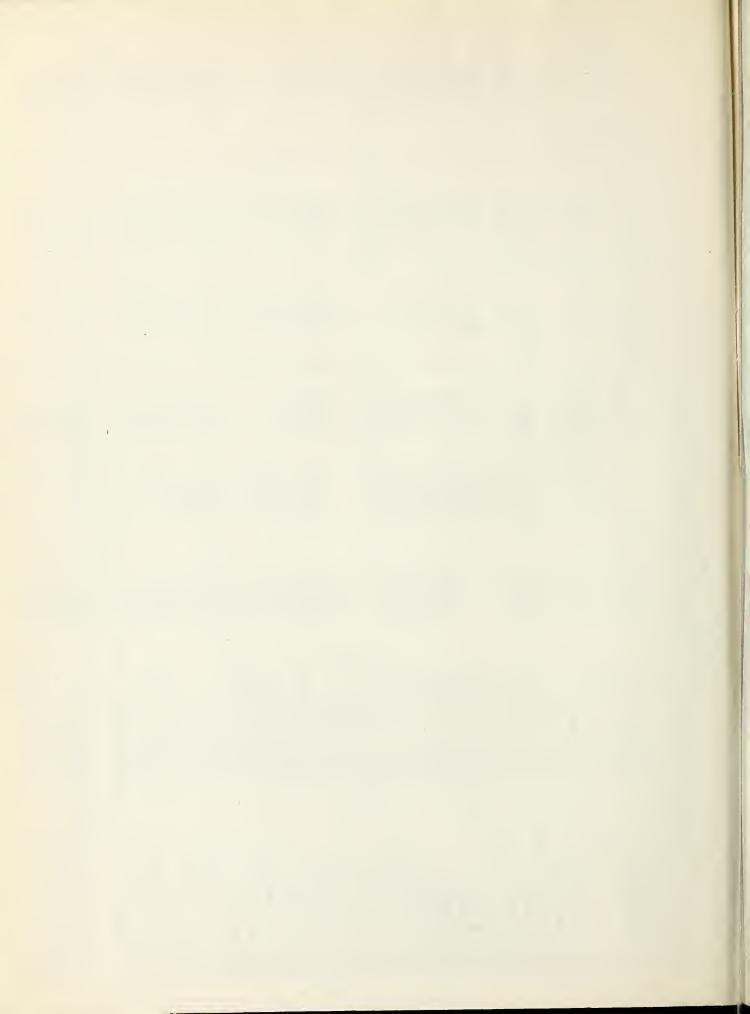
## INDEX TO MONTANA & NORTHERN WYOMING SNOW COURSES

	ŁX	10					& NC				VG			,		RSES	
	Montana Number	Elev.	Lat.	Twp.	Range Long.	Record Began	Feasuring Dates <sup>a</sup>	Heasured By:	Prainage Basin and Course Name	Fontane redmid	Elev.	Sec. Lat.	Typ.	Range Long,	Record	Heasuring Dates <sup>a</sup>	Measus By:
EFFERSON RIVER (ROCK-BEAVERHEAD)	MISS	OURI	RIVER	R D	RAINA	GE				ssour	I RIVI	R D	RAIN	AGE	CON	T.	
skeview Ridge	1153	7400	27	145	2%	1948	3,4,5	9	Beavers Fill	oming	8900	6	43N	102W	1948	2215	12
akeview Canyon imekiln	1154	6930 6950	26 5	14S 15S	2W 9W	1948	3,4,5	9	Owl Creek Tensleep R.S.	8F1 7E3	8700 8300	36 30	43N 43N	101W 86W	1948 1948 1935	2,3,4,5	12 12 1
hite Pine Ridge	1251	8850	18	148	9'W	1948	3,4	1	Timber Creek Ranger Creek	952 751	B800 B800	25 32	47N 53N	103W 88W	1948 1935	4,5 4,5 4,5	î2 1
(HOPSE PRAIRIE)	13010	7600	12	8S	16W	3010	2 /	,	Wood River	9F7	8000	28	46N	103W	1939	2,3,4,5	12
old Stone emhi Pass	13D9 13E1	8100 7480	11	8S 10S	16W 15W	1948 1948 1948	3,4 3,4 3,4	1 1	(SHOSHONE RIVER) W								
errell Croek	13012 1382	6650 7090	14	9S 10S	15W 15W	1948	3,4	1	East Entrance Sylvan Pass	10E6 10E5	7000 7100	17 12	52N 52N	109W	1948 1936	1,2,3,4,5	5
Selway Junction	13011	6800	27	88	15W	1948	3,4	ī	TONGUE RIVER Wyom	ing							
(BIG HOLE)									Sig Goose Burgess Ranger Sta.	752 754	7700 7900	4 36	53N 56N	86W 89W	1945 1950	2,3,4,5	1
Mig Hole Pass Mig Hole Pass (Selow		7440 6900	28 24	3S 3S	18W 18W	1948	3,4	1	Dome Lake Lodgepole	755 931	8800 8200	11 32	53N 56N	87W 106W	1950 1940	2,3,4,5 2,3,4,5 4,5	12
ast Boundary ibbons Pass ahnke Creek	1305 1302 1306	6700 7100 7340	22 4 25	3S 2S 7S	17W 19W 16W	1948 1934 1948	1,2,3,4,5	1,2	POWDER RIVER								
iner Forks iner Lake	13D6 1307	7300 6720	24	6S 6S	17W 16W	1948	3,4 3,4 3,4,5	1	North Powder Muddy Paes	758 757	8500 9700	5 11	47N 48N	85W 85W	1951 1950	2,3,4,5	12
(WISE RIVER)						-/-/	2,412	-	Soldier Park Sour Dough	756 651	8700 8500	36 17	51N 49N	85W 84W	1950 1936	2,3,4,5	12
nderson Hdw.	13814	7000	18	35	12W	1948	3,4	1	Red Fork	751	7000	18	43N	85W	1936	2,3,4,5	12
lk Horn iss River	13015 13013	8450 6300	15 15	4S 2S	12W 12W	1934 1948	3,4,5	2									
(RUBY RIVER)																	
ottonwood ottonwood (Upper)	1152 1151	5900 8400	24	10S	3 W 2 W	1948	3,4	1									
tashlight bacco Root	12D3 12D2	6950 6900	30 22 13	8S 4S	2W 7W 4W	1948 1945 1948	3,4 3,4,5 3,4	1		(	COLUA	1BIA	RIV	ER B	ASIN		
Igilante	1101	6125	28	95	3W	1948	3,4	î	KOOTENAI PIVER	25.02	1000	,	0.511		10-5		,
AOISON RIVER									Baree Hountain Slue Bird Basin	1581 14A1	6000 6800	24	25N 37N	31W 26W	1937 1937	4,5	1
ebgen est Yellowetone orris Basin	11E7	6550 6700	22 34 44 -44 1	11S 13S	3E 5E	1934	1,2,3,4,5	2	Red Mountain FLATHEAO RIVER	15A1	6000	4	36N	29W	1937	3,4,5	1
ALLATIN RIVER	1082	75 00	4444		1100-421	1935	3,4	5,6	Basin Creek	13814	5000	11	19N	12W	1951	2,3,4,5	1
evil'e Slide	1004	81.00	14	58	6E	1935	2.3,4,5	2,6	Big Creek Brush Creek	1383 1444	6750 5000	6&7 13	22N 30N	18W 26W	1941	3,4,5	1
ood Meadow ystic Lake	10D3 10D2	6600 6600	22 30	4S 3S	6E 7E	1934	2,3,15	2,6	Cattle Queen Oesert Mouhtain	13A1 13A2	4700 5600	7 24	35N 31N	17W 19W	1939 1937	3,4,5 1,2,3,4,5	5
ew World L-Mile	1001 11E6	6700 7150	24	3S 11S	6E 5E	1939 1934	1,2,3,4,5	6,7	HellRoaring Oivide	1443 13813 1442	5770 4530 4300	35 18 7	32N 21N 37N	22W 13W	1942	3,4,5	1
ISSOURI RIVER MAIN :	STEM								Kishenehn Limestone Paes Logan Creek	13B8 14A5	7000 4300	28 34	18N 30N	21W 12W 24W	1946 1948 1937	4,5 3,4,5 3,4,5	1
nessman Reservoir	1205 901	6200 6100	2 24	8N 12N	5W 17E	1936 1941	1,2,3,4,5	2	Marias Pass Snow Lab. /16	13A5 13A9	5250 5200	34 15	30N 29N	14W 14W	1934	1,2,3,4,5	2
asshopper ings Hill	1002	7000 7950	19	9N 13N	8E 78	1938	3,4 3,4 3,4,5	1 1 2	Spotted Sear Mt. Strawberry Lake	1382 13A10	7000 6500	23 11	25N 28N	15W 19W	1948	3,4,5	1
icnic Grounds	1206	6500 7200	22	5N 1N	6W 7W	1940 1938	2,3,4	3	Trinkue Lake Trout Lake #2	13B1 13A12	6500 3600	9 21	25N 28N	17W 17W	1948	3,4,5	1
emple Pase on Mile Creek, Lower	1201	6900 6250	16 13	13N 8N	7W 6W	1934 1935	3,4,5	2	Upper Holland Lake Twin Creeks	1385 13811	7000 3580	28	20N 26N	16W 16W	1948	3,4,5 2,3,4,5	1
en Mile Creek, Middle en Mile Creek, Upper	12C3 12C4	6800 8000	13 19	8N 8N	6W 5W	1934 1935	1,2,3,4,5	2	Ouintonkon Coyote Hill	13A13 13810	3800 1,200	15	26N 18N	17W	1951 1951	2,3,4,5 1,2,3,6,5	1
TON RIVER)									El Dorado Mine Gold Creek Lake	1309 1308	7800 7200	23 1L	8N 8N	12W 12W 13W	1946 1946	4 L	11
reight Crack	12A1 12B2	6000 5600	13 16	26N 25N	10W 9W	1948	3,4	1	Intergenrd Lubrecht Forest Borth Fork Jocko	1304 1308 1387	5400 5330	6 31 3	5N 1LN 17N	15W	1939 1951 1941	2,3,4 1,2,3,4,5 3,4,5	3 13 4
est Fork	12BL	6000	6	25N	9W	1948	3,4 3,4	ì	Pionio Grounde Pipestone Pess	1206	6500 7200	22 11	5N	6स 7स	1940	2,3,4 2,3,6,5	3
SUN RIVER)									Rainy Lako Slide Rock Mountain		1300 7100	11 20	18N 10N	16W	19L7 1937	3,4,5	1
abin Creek	12B8 12B6	5500 5400	33	20N 23N	10W	1948	3,4 3,4	1	Southern Cross Stemple Pass	13 C5 13 C1	6500 6900	9 16	5N 13N	13 m 7m 13m	1939 1931	2,3,L 3,L,5	3
	1289 1285 1287	5600 5300 7000	36 31 20	20N 24N 22N	10W 10W 10W	1948 1949 1934	3,4	1 1 2	Storm Lake No. 2 Stuart Mill Stuart Mountain #1	1307 1306 1301	7780 6500 7100	19 19 6	Lin 5n 1Lin	13m 18w	1939 1939 1936	2,3,L 2,3,L	3
7 Lake	13B9 12B3	7300 6800	21 17	23N 25N	12W 10W	1950	3,4	1	Scout c Englishin "1	1,01	1100		A LQU*	1011	1,,00	4	•
	12B4	5700	32	25N	10W	1949	3,4	i	FEND OREILLE RIVER								
MARIAS RIVER)									Saree Nountain Preszeout Submit #2	1381	6800	21	25 N 15 N	31W 27W	1937	4.5 L	1
rigs Pass	13A5	5250	34	30N	14W	1936	1,2,3,4,5	2	Hoodoo Creek	1501	6200	9&16	14N	27 m	1937	ii.	1
(TLK RIVER)									SITTERROOT RIVER								
cky Boy	9Al	5200	15	28N	16E	1941	3,4	7	East Fork Ranger Stn Gibbons Pass	1302	5400 7100	10	2N 2S	17W	1937 1934	1,2,3,4,5	1
USSELSHELL RIVTR)									Mud Creok Pasture Nez Perce Camp	14c1	1500 5580	2L 19&20	11N 1S	21/4 23/4	1937 1937	3 L	1
	1003	7000	19	9N	8E	1938	3,4	1	Nezperce Pasa Skalkaho Summit	14D1 13C3	6575 7259	32 30	6N 28N	16E 17₩	1937 1937	<u>L</u>	1
PER YELLOWSTONE)																	
amp Senia anyon	901 1083	7890 7750	2	88	18E 1100-301	1937 1938	1,2,3,4,5	1									
revice Ft.	1007	7400 8400	25 29	9S 93	145 98	1937	1,2,3,4,5	5									
ake Camp	1006 1024 1081	8000 7850 7300	22 44°=341 44°=541	79	125 1100-241 1100-371	1941 1937 1938	3,4 1,2,3,4,5 1,2,3,4,5	12 12 5		SASKA	TCHEV	VAN	RIVI	R R	ASIN		
SHIFLDS RIVER)		, ,,,,,				1730	~9~9/9497		ST. WARY RIVER	on on o	CHEV	. / ۱۱۹	KIVI	07	13111		
	1003	6500	10	4N	108	1938	3,4	1	Ionberg Laka	13A3	6000 LE	0-50	1	130-121	1922	5	2,8
OWER YULLOWSTONE									Piegan Pasa #0	13 Ab	0500 LE	0-15	1	130-L01	1922	5	2,8
ind River) Wyoming	1.022	0000	22	1.121	120	1000	0.2.1.		Mount Allan #7 Ptarmigan #8	13 A7 13 AB	7000 LE	10-144°	1:	13°-40° 13°-42°	1922	5 5	5,8
rooks Lake #3 prroughe Creek inwoodie	10F2 9F6 9F10	9200 8800 10000	23 15	44N 43N 39N	110W 107W 105W	1939 1948 1948	2,3,4,5	12									
y Creek Noir	9F9 9F2	9500 8750	34 27	4N 42N	108M	1948 1948	2,3,4,5 2,3,4,5 2,3,4,5	12 12 12	a. Numerals 1,2,3,1	and 5	refer to	Januari	1 50	mery 1	Verd	. Annil 1	nd Ver
yser Creok	9P3 9G2	8500 10000	12 22	41N 23	108W 3W	1948	2,3,4,5	12 12	b. Numorals refer								army
	9F4 9G3	9500 9500	24, 23	41N 2S	1084 3W	1948	2,3,4,5	12	1. U.:	S. Forest	Servica						
ittle Warm Dequito Park R.S.	9F1 9F11	7500 9000	3 26	1N	109W 4W	1939 1940	2,3,4,5	12 12	2. U.: 3. Mor	S. Geolog ntana Pow	ioal Sure or Compon	ey and	U.S. E	nginaer (	Corps		
equito Park R.S. eridan L.S. Lawrenco R.S.		8000	.1	43N 2S	107W 2W	1940	2,3,4,5	12 12 10	և. Մ.Տ 5. Na:	S. Indian tional Pa	Servica rk Servic	8.					
ittle Warm sequito Park R.S. heridan U.S. Lammenco R.S. Croes Ranch rout Creek	9F5 9G1	84,00	20		1100												
ittle Warm sequito Park R.S. heridan U.S. t. Lawrenco R.SCroes Ranch rout Creek ogwotee Pans   1 Popo Agie River) Wy	9F5	9600	29	44N	110W	1936	2,3,4,5		7. C11	ty of 80r	erimont S						
	9F5 9G1 LOF1 yoming		29 23 19 12		110W 100W 103W	1939 1936 1948	2,3,4,5 2,3,4,5 3,4,5 2,3,4,5	12 12 12	7. C11 8. Don 9. U.S	ty of Sor minion Wa S. Fleh a		ower Bu					

# STORAGE IN RESERVOIRS OF MONTANA - May 1, 1953 MISSOURI RIVER BASIN - MONTANA

RESERVO IR	Location on or	Usable		Reservoir Volumes	Volumes in	in 1,000's a.f.	
	diversion from	Capaci ty	1953	1952	1951	1950	1943 - 1952
Lima Reservoir Ruby Reservoir Willaw Creek Reser.	Beaverhead Ruby River Willow Creek	84.00 38.85 17.76		62.45	72.02	. †15•69	67.03
Hebgen Lake	Madison River	345.00	203.3	205.2	261.3	231.4	220•5
Ennis Lake	Madison River	41.00	33.39	38.35	29,89	32.78	35.03
Middle Creek Reser.	Hyalite Creek		5.48				
Lake Sewall	Missouri River		80.52	26.42	20.47	12.24	26.19
Hauser Lake	Missouri River	62.50	51.87	34.64	52.93	36.73	43.13
Lake Helena	Missouri River	10.45	98*9	2.24	7.20	2.70	6.81
Holter Lake	Missouri River	81.92	36.61	57.80	56.51	68.03	57.78
Gibson Reservoir	N.Fk. Sun River	105.00	73.89	92.57	81.71	52.51	73.22
Willow Creek Res.	N.Fk. Sun River	32.30	28,18	26.82	27.09	5.89	18,28
Pishkun Reservoir	N.Fk. Sun River	32.00	19.94	23.48	19.0h	21, 66	20.46
Bynum Reservoir	Teton River						
Lower Two Medicine Lake	Two Medicine River	17,00		0	0	0	2,10
Four Horns Lake	Badger Creek	20,00		7.66	8,58	6.36	80.8
Swift Reservoir	Birch Creek	30.00	21,98	30.19	30.20	24.89	28.01
Lake Francis	Dupuyer & Birch Cr.	112,00	101.40	98.80	102,20	91.42	102,20
Ackley Lake	Judith River	5.82		4.87	4.81	4.36	790
Durand Reservoir	N.Fk.Musselshell	7.01	5.17		7.03	7.03	
Martinsdale Reservoir	S.Fk.Musselshell	23.10	12.68		14.23	13.73	
Deadman Basin "	Musselshell River	52.50				52.00	
Fort Peck Reservoir	Missouri River	19,000,00	12,630.0	13,630.0	13,400.0	12,540.0	12,512.0
Fresno Reservoir	Wilk River	127,20	97.49	148.50	132.50	76 <b>.</b> 09	86.96
Nelson Reservoir	Milk River	99.80	36.66	40.28	18,49	13.40	31.84
Mystic Lake	W.Rosebud Creek	20.80	4.84	2.87	1,21	0.579	3.34
Cooney Reservoir	Red Lodge Creek	27.50		18.34	16.51	18,98	13.71
Tongue River Reser.	Tongue River	73.90	22.14	30.11	14.98	15.10	17.31
Sherburne Lake	Swiftcurrent Cr.	66,10			39.94	34.08	

		YELLOWSTONE RIVER BASIN - Wyoming	SIN - Wyoming			
Buffalo Bill Reservoir Shoshone River	Shoshone River	1,56.60	233.7	236.2	164.3	278.6
Boysen Reservoir	Wind River	819,80	253.4			
Pilot Butte Reservoir	Wind River	30.10	19.1	21.0	19.9	205.6
Bull Lake Reservoir	Wind River (Bull	155.00	33.9	71.5	8.9	51.6
	Creek)				_	_

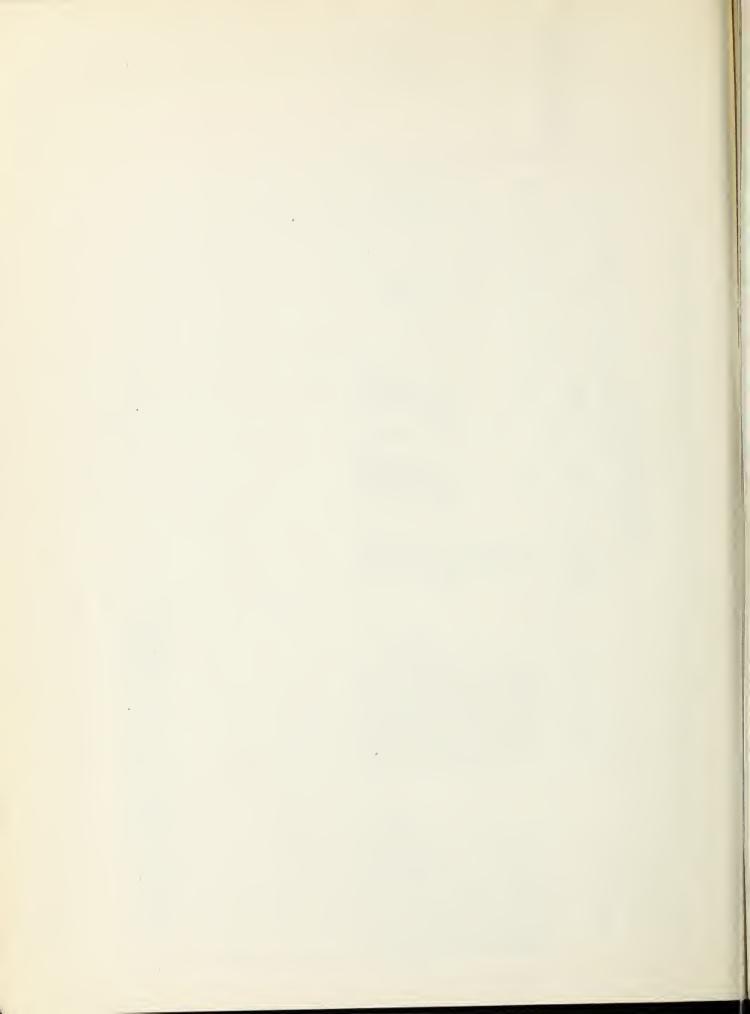


# STORAGE IN RESERVOIRS OF MONTANA - May 1, 1953

## COLUMBIA RIVER BASIN

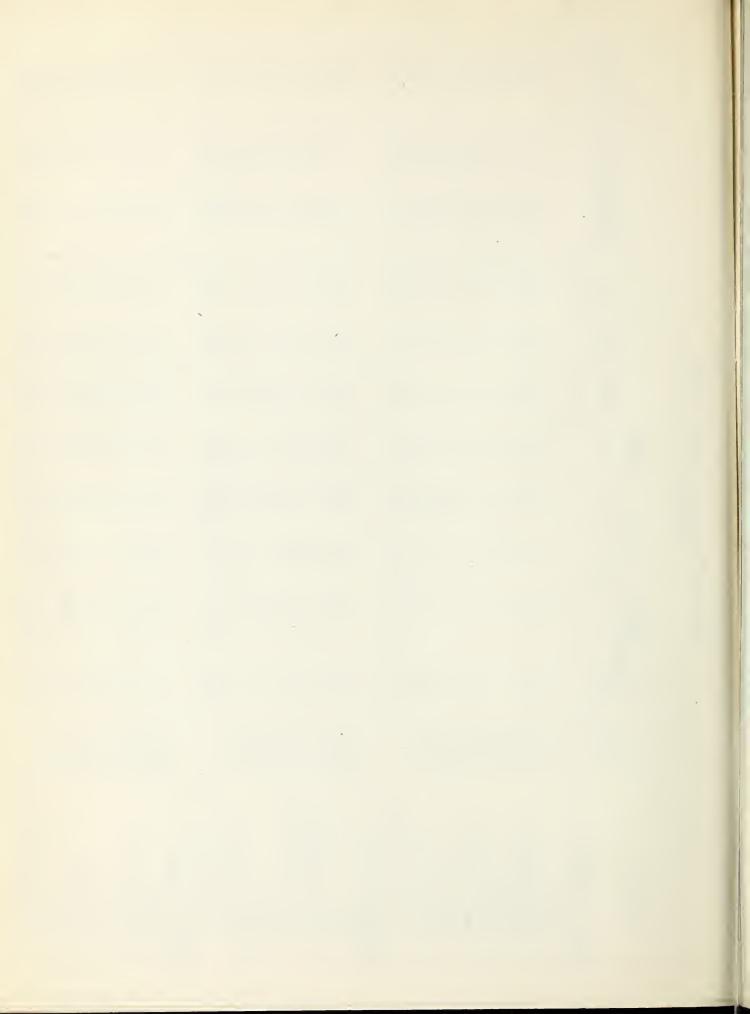
Semulo								
## Procedure of the control of the c		. •	;	Res	ervoir Volu	mes in 1,000	'S a.f.	
Flint Creek 31.00 23.80 21.58  E.Fk.Rock Creek 16.04 Nevada Creek 12.60 So. W.Fk. Bitterroot 31.70 Rock Creek 34.80 So.Fk.Flathead River 1.791.00 777.9 Flathead River 1.791.00 777.9 Little Bitterroot* 56.10 31.64 Dry Fork Creek* 6.70 5.58 Flathead Irr.Proj.** 98.60 43.44 Jocko Creek 7.6 0.245		Location on or diversion from	Usable Capacity	1953	1952	1951	1950	10-yr. average 1943 - 1952
Nevada Creek 12.60  8s. W.Fk. Bitterroot 31.70  Rock Creek 34.80  So.Fk.Flathead River 1.791.00 777.9  Flathead River 5.50.10 31.64  Dry Fork Creek* 6.70 5.58  Flathead Irr.Proj.** 98.60 43.44  Jocko Creek 7.6 0.245  2.58	Lake Res.	Flint Creek E.Fk.Rock Creek	31.00 16.04	23.80	21.58	21.41	19.0l4	21,68
Rock Creek       34.80         So.Fk.Flathead Riv.       3,500.00       898.4       216.7         Flathead River       1,791.00       777.9       1212.0         Little Bitterroot*       36.10       31.64       36.12         r       Dry Fork Creek*       6.70       5.58       6.41         s.       Flathead Irr.Proj.**       98.60       45.44       67.17         Jocko Creek       7.6       0.245       2.58	k Res. root Res.	Nevada Creek W.Fk. Bitterroot	12.60					
Flathead River 1,791.00 777.9 1212.0 Little Bitterroot* 36.10 31.64 36.12  r Dry Fork Creek* 6.70 5.58 6.41  s. Flathead Irr. Proj.** 98.60 45.44 67.17  Jocko Creek 7.6 0.245 2.58	Res.	Rock Creek	34.80	808	7 7 LO	20.50	19,00	
Little Bitterroot* 36.10 31.64 36.12  r Dry Fork Creek* 6.70 5.58 6.41  s. Flathead Irr. Proj.** 98.60 43.44 67.17  Jocko Creek 7.6 0.245 2.58	ke	Flathead River	1,791.00	777.9	1212,0	9°066	829,3	6,199
ir Dry Fork Creek* 6.70 5.58 6.41 es. Flathead Irr. Proj.** 98.60 4,3.44 67.17 Jocko Creek 7.6 0.24,5 2.58	erroot	Little Bitterroot*	36.10	31.64	36.12	32.56	36.12	21.77
es. Flathead Irr. Proj.** 98.60 43.44 67.17   67.17   Jocko Creek 7.6 0.245 2.58	servoir	Dry Fork Creek*	6.70	5.58	6.41	5.82	6.02	1,8,00
Jocko Creek 7.6 0.245   2.58	ley Res.	Flathead Irr. Proj. **	98°60	43.44	67.17	58.84	32,66	16.81
	Lake	Jocko Creek	<b>7.</b> 6	0.245	2.58			

Sum of two reservoirs on Little Bitterroot Sum of two reservoirs on Dry Fork Creek Sum of (8) eight reservoirs on Project



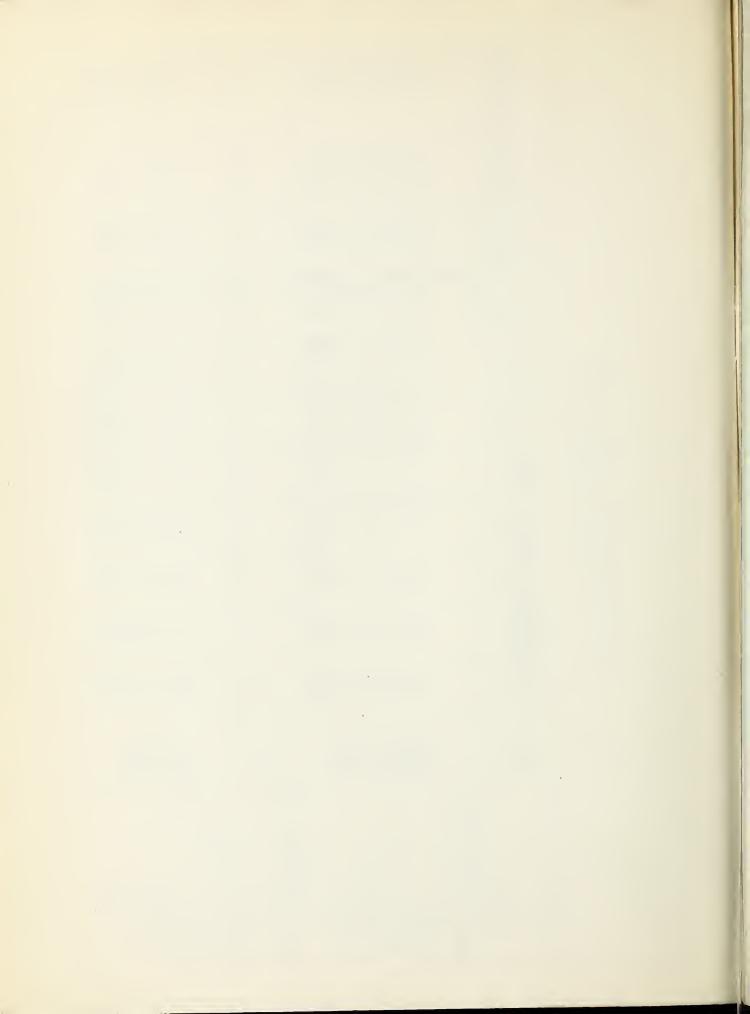
## PRECIPITATION DATA FOR APRIL 30, 1953 MONTANA

	Precipitation	Departure		93	20	-1.25	-1.93	+1.69	+13.16	-5°-[-	+2.16	15.01		43.63	+0.820	-0.13	-0.57	-1.29	7.01	-0-07	-0.37	[	-0.88	-0.36	-1.98	-2.57	-0.12	-1.48	-0.93
				8.99	4.19	6.28	5.53	16.61	19,82	99.6	21.45	12.50		7.64	7.38	14.39	4.57	5.83	70.7	11.47	7.12	1	3.73	3.83	5.59	5.74	5.23	5.29	14.67
	Accumula	1952-53 No		90°8	3.99	5.03	3.60	18,30	32.98	7.22	24.61	13.01		10.87	7.00	7.56	00•17	4-54	0 0	11.40	6.75	00 1	2,87	2.93	3.61	5.17	5.11	3.81	3.74
	Dept.	from Normal		+1.30	+0.30	-0.34	99.0-	+1.69	+3.50	-0.33	+1.08	+1.03		+6°-1;	+0.70	-0.29	60.0+	+0.51	7,5	+1-54	+0.52		40.16	40.84	+0.45	-0.37	+1.40	+0.38	+0.22
		Apr.		2.29	1.36	0.91	0.21	3.19	5.78	0.62	טיט סיני	2.37	,	3.56	1,85	0.83	1.36	1.83	000	4.28	1.98		1.54	1.73	1.59	0.93	0, 0, 0, 0, 0, 0,	1.91	1,82
		Mar.		06.0	0.45	0.56	~[간	1.62	3.20	0.24	1.5.	1.03		1,52	0.77	0.22	0.31	0.50	1,67	1.34	0.70	1	0.28	0.14	0.23	0,45	0.68	0.42	64.0
1953		Feb.			1.03	±6.	•35	3.24	4.50	1-40	20,0	1.93		1.53	1.46	1,02	•79	77.	1.1 0.0	2.04	1.38	5	67	.07	•25	247	248	.53	2110
	l c	Jan.		2.96	•73	1.27	1.60	7.007	00-77	N I	15.14	5.68	-	72.2	3 1.	.5.	77.	2.50	1,40	1.60	1.08	6	20.01	.70	.11	•36	•70	.85	•45
	Precipitation	Dec.		.87			.27	÷43	.12	91.	7,00,0	1.12		80.	90.	.28	80.	.18	0,40	24-	<u>+</u>	č	.11	80.	EH	•15	1.6	90.	•10
1952		Nov.		•28	•75	1.07	†9•		1.63		75.	-72	·	8:	1.36	1.05	.65	525	5	1.48	.83	0	3	•10	,17	.32	5.5	T	.25
	Current	Oct.		•05	90°	€⊣	.11	80.	•75	.13	02.	17	-	7.5	.16	•35	.37	•18 21	CT.	.19	•17	5	T E	ц.	•03	-47	<u>_</u> 6	+70°	80.
	Elev-	ation		3000	5533	5280	3529	3154	5213	4101	2487		-	4300 21.88	3664	3893	4132	4445	0000 0000 0000 0000	6558		, ,	2180	1962	8242	3139	2592	3026	
	Station		WEST OF DIVIDE		Butte (Airport)	Phillipsburg	Hemilton	West Glacier	Summit (Marias)	Ovendo 1 SW	Trout Creek Thompson Falls	Average (9)	CENTRAL DIVISION	Babb	Great Falls(Airport)	Helena (Airport)	Lewistown (Airport)	Livingston M: 2000	West Vellowstone	Mystic Lake	Average (9)	EASTERN DIVISION	Ft. Peck	Medicine Lake	Circle	Billings #2	Miles City Glendive		Average (8)



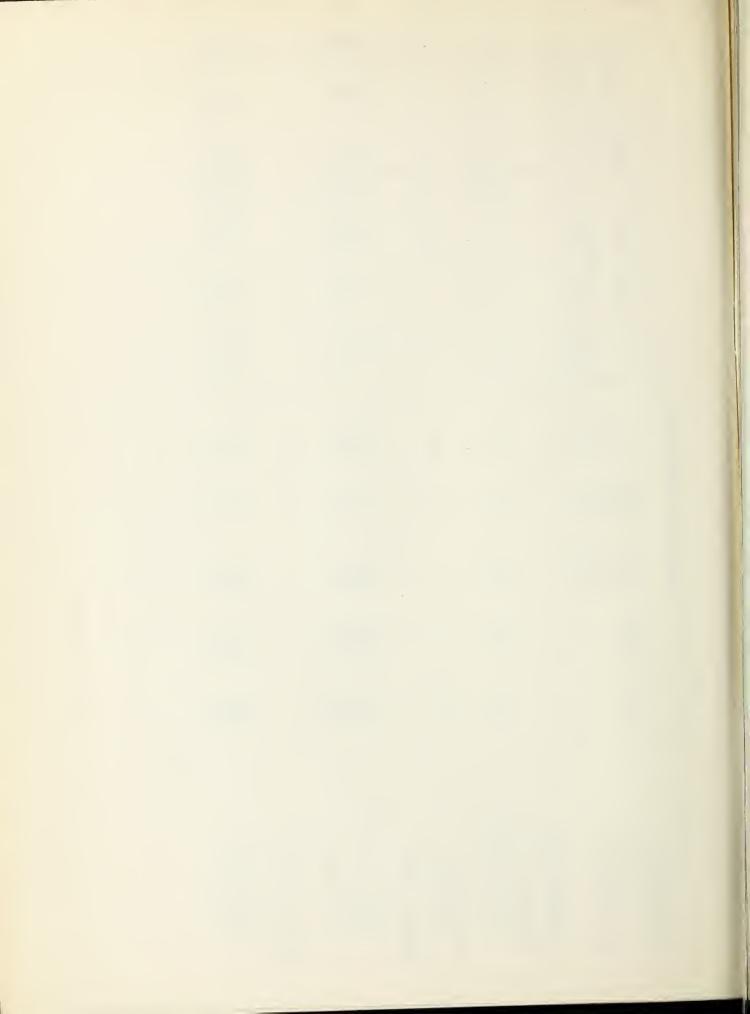
PRECIPITATION DATA FOR April 30, 1953 NORTHERN WYOMING

Precipitation	Departure	10.62 -1.40 -0.50 -0.07 -0.57 -0.57	-1.01	-0.91 -0.51 -0.51 -0.91
		3.72 2.84 7.75 7.75 11.05 11.06	6.97	4.62 5.05 6.21 4.98 6.09 5.39
Accumulated	1952-53	4.34 1.44 2.85 7.68 4.97 3.46 3.46	96*5	3.71 3.03 5.70 14.98 7.00 14.88
Dept.	from Normal	+1.76 -0.06 +0.53 -0.09 +0.53 +0.53 +0.59	-0.39	-0.08 -0.43 +0.65 -0.18 -0.18
	Apr.	2.79 0.54 1.53 2.37 2.55 1.89 1.66	1.53	1.18 2.40 2.40 1.58 2.01 1.67
	Mar.	0.18 0.30 0.40 0.45 0.52 0.23 0.23	0.77	0.28 0.27 T 0.56 0.23
1953	Feb.	. 97 . 18 . 75 . 72 . 13	1.53	.55 .94 .94 .278
t jon		45.88.78.85.49.	1.14	.69 .40 .62 1.13 .74
Precipitat	Dec.	.02 .11 .08 .06 .06 .14	. 50	.65 .86 .87 .12 .12
1952 Current Pr		. 21 . 194 . 30 . 30 . 34 . 47	.27	.19 .04 .40 .102 .102
Cur	Oct.	00° 00° 00° 00° 00° 00° 00°	22.	
Elev-	ati on	4984 3825 4061 6930 4336 4954 6917	7051	3680 5280 4542 5000 4850
	Station	Cody Lovell Worland Sunshine L SW Thermopolis Riverton Dubois Average	TONGUE RIVER BASIN Sheridan	Arvada Metz Ranch Gillette Nine Mile Greek Mid-West Average



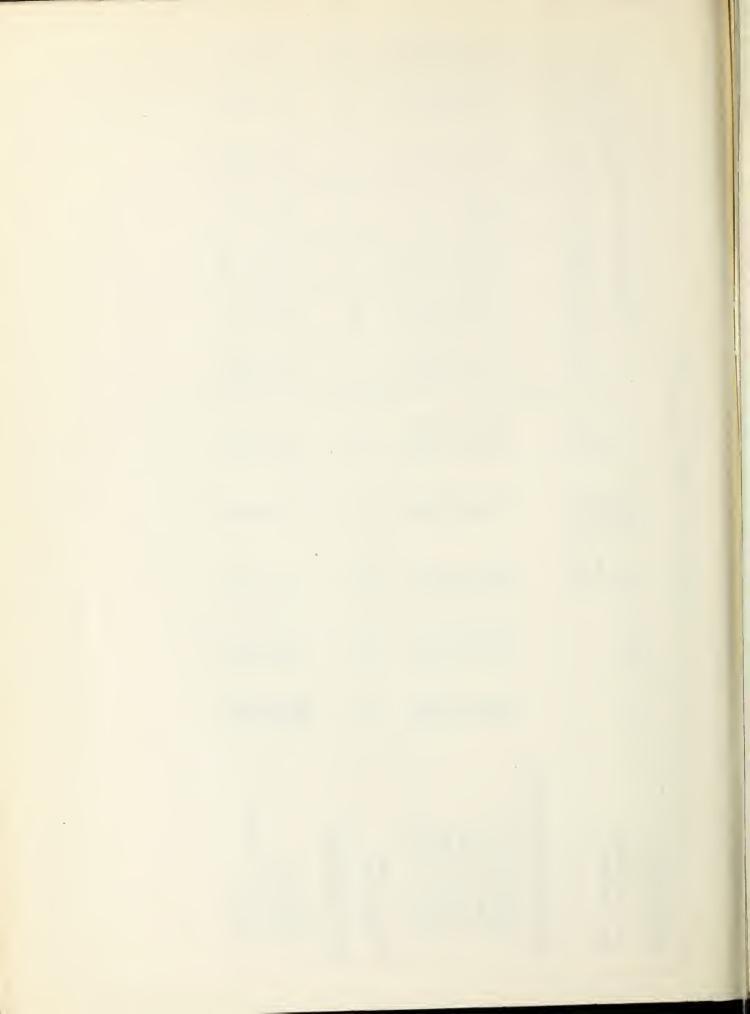
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NICYG TWOOCCIM												
	No.	Elev.	Date	Snow			Water	Water Content	$\sim$	Inches)		<b>&gt;</b>
Drainage Basin & Snow Course *			of Survey	Depth (In.)	May 1	Д	Past Records	ords	1	Average	(0)	(D) (c)
			1953	1953	1953	1952	1951	1950	1949	Avg.	% Avg.	٦, ١
JEFFERSON RIVER												a
(Rock-Beaverhead) Lakeview Ridge Lakeview Canyon	11E3 11E4	7400 6930	4/30	23	7.6 11.7	10.6	4.9	1 1	700	5.9	129 124	מע
(Wise River) Elk Horn	13015	8450	5/1	31	10.2	3.8	1	10.7	5.5	r.	186	11
MADISON RIVER												
Hebgen West Yellowstone 21-Mile *Big Springs	11E5 11E7 11E6	6550 6700 7150 6500	1,728 1,728 1,729	32 77	6.2 5.8 12.5	7.2 6.8 16.1	0 5.1 12.5	8.4 10.0 18.8	1.2 4.4 12.6	2.8 3.7 10.6	222 157 118	888
GALLATIN RIVER												
Devil's Slide Hood Meadow 21-Mile	1004 1003 11E6	8100 6600 7150	5/5 5/2 14/29	63 16 36	23.3 5.2 12.5	25.6	18.7	24.5 20.3 21.4 8.5 1.7 4.2 18.8 12.6 10.6	20.3	21.4 4.2 10.6	109 124 118	19
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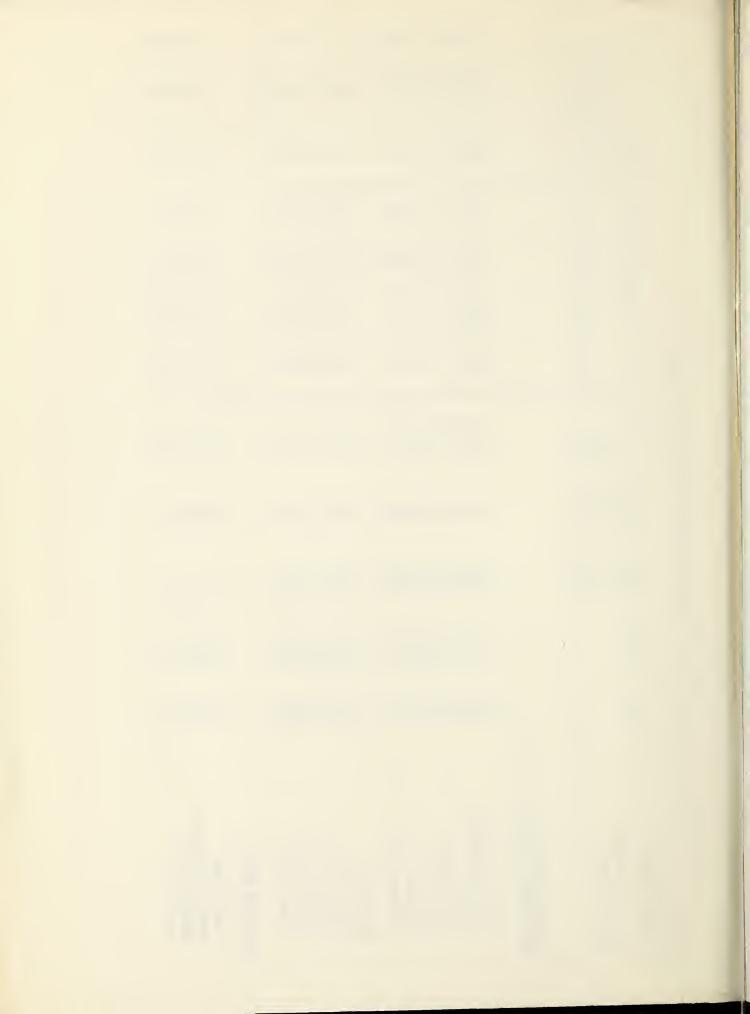
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MISSOURI BASIN												
	No.	Elev.	Date	Snow			Wate	Water Content	$\sim$	Inches)		<b>&gt;</b> -
~			of	Depth	May					9.7	ge Data	Φ.
snow course *			Survey	(In.)	٦		Past Records	ecords		M	May 1	ಹ
			1955	1953	1953	1952	1951	1950	1949	Avg.	%Avg.	٨
												Ŋ
MISSOURI RIVER MAIN STEM												
Chessman Keservoir	1205	6200	1/50	12	3.5	8	3.0	7.8	00	1.6	219	18
Kings Hill	1001	7950	1/29	37	12.4	9.8	12.8	19.6	12.8	11.6	107	13
Pipestone Pass	1201	7200	5/1	777	6.1	0.3	6.3	2,0	1.0	2.0	306	)=
Stemple Pass	1201	0069	14/30	31	8.8	7.5	11.2	1/1.2	6.3	5.9	1/19	101
Tenmile, Lower	1202	6250	5/2	18	5.4	8	5.1	8,0	0	0	270	18
Tenmile, Middle	1203	9800	5/2	35	11.8	1.7	11.2	16.3	3.5	6.3	187	91
Tenmile, Upper	1204	8000	5/5	4	16.2	5.9	14.8	18.8	7.1	10.2	159	18
(Marias River)											- , ,	
Marias Pass	12B5	5250	14/30	45	17.4	10.5	19.7	26.3	12.1	6.6	176	19
UPPER YELLOWSTONE												
			,									
Canyon Cooke Ci+v	10E3	7750	ر د د	57 7.	13.9	13.3	17.3	7.6	10.8	11.6	120	6
Tolo Com	ָרְרָלְּרָרְ פון ר	7850	1/0	- C	ر ب ب	, c	V 0	1.00	0,0	t.	011	א כ
Lodgenole Wroming	OE CEO	2000	7/7	8 2	ر•0 د	· ,	מ פ	11.9	0.0	ρ.	25,5	ω ,
Lupine Total	וביים (ביים ביים ביים ביים ביים ביים ביים	7200	1/2	7,0	C•11	0 0	0.47	ן כ	٧.٧	9.0	אל ל	9
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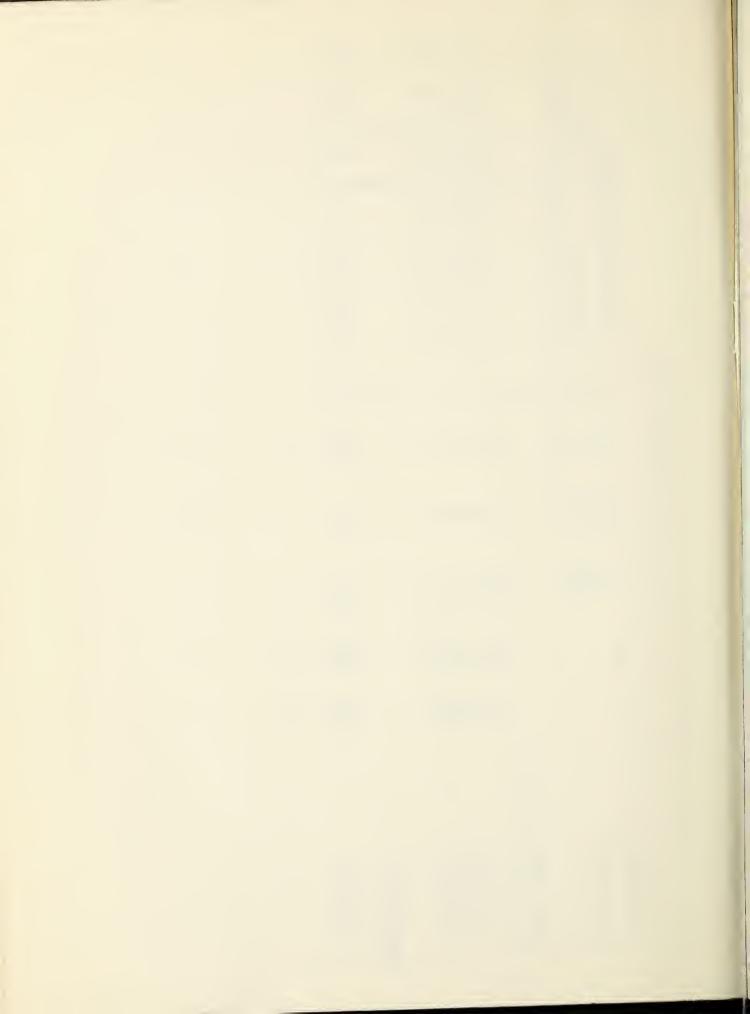
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	(8)	Average I				22.4	26.0 26.0 10 7.0 11 18 18 19 19 18 18 18 18 18 18 18 18 18 18 18 18 18	12.6
	(Inches	<b>V</b>	9 Avg					
	Mater Content	S.D.	6461 0			8 00 00 00 2 00 00	200 200 200 200 200 200 200 200 200 200	10.8 11.3.2 3.6 2.1 3.4.3.2
	ater C	Records	1 1950			20 20 20 20 20 20 20 20 20 20 20 20 20 2	5 10.6 3 30.3 10.6 10.3 10.3 10.5	5 18.4 23.1 27.5 3 25.3
	M	Past	1			28.1	18.6 11.5 25.8 8.1 8.1 6.9	12.6 12.0 17.3
			1952		29.1	17.8	26.05 26.09 26.09 26.09 26.09 26.09	20.5 20.1 11.6 20.7
		May	1953		28.6 17.0 6.3	19 % 5 % 5 %	14.9 9.4 11.9 7.7 5.1 4.7	2001 2001
	Snow	Depth (In.)	1953		19 19 19	<b>#</b> ###################################	25 23 24 27 21 21 21	37 31 33
	Date	of Survev	1953		14/26 14/27 14/28	14/27 14/26 14/26	17/2 2/2 2/2 2/2 2/2 2/2 2/2 2/2 2/2 2/2	27.7.7
	Elev.				9200 8800 8750	8500 9500 7500 8000	10000 9500 9500 9500 9600	9500 9000 8500
	No.				10F2 9F6 9F2	9F3 9F4 9F1 9F5	9F10 9F9 9G2 9G3 9F11 9G1	862 864 861 863
MISSOURI BASIN		Drainage Basin & Snow Course *		LOWER YELLOWSTONE (Wind River - above Div.Dam)	Brooks Lake #5 Burroughs Creek Du Noir	Geyser Creek Little Warm Sheridan T-Cross Ranch	Dinwoodie Dry Creek Hobbs Park Mosquito Park St. Lawrence Tromt Creek	POPO AGIE RIVER Blue Ridge Grannier Meadows Sawmill Glade South Pass

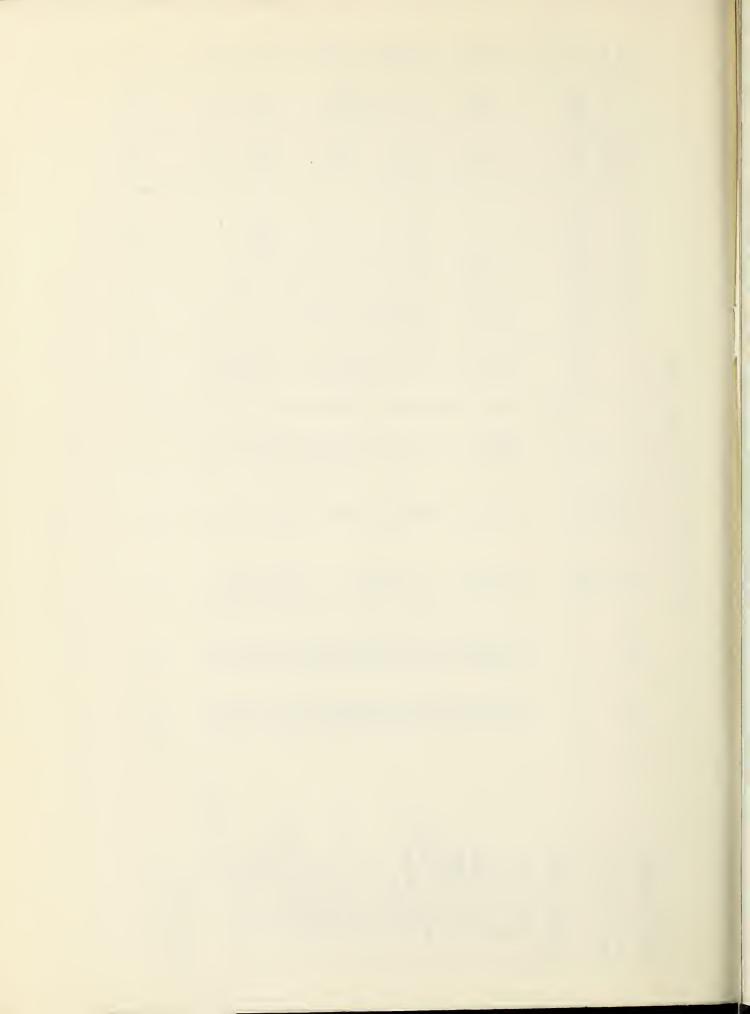


		Average Data	May 1	%AVE.		227	149	114	131	88		134	125
	hes)	Avera	Ma	Avg.		6.3	7.0	6.1	7.47	14.0		5.0	80
	Water Content (Inches			1949		7.8	5.6	6.7	1.5	2.3		0.0	1
	Conter		cords	952 1951 1950 1949		8.0	10.0	8.4	8.5	5.0		6.0	9.5
	Water		ast Re	1951		6.8	5.4	6.2	5.5	5.4		6.47	7.7
			Ā	1952		5.7	6.9	5.2	3.8	1.1		2.5	7.1
		May	-	1953		14.3	10.4	7.3	5.8	3.5		6.7	10.0
	Snow	Depth	(In.)	1953		41	32	28	23	13		ਰੋ	30
	Date	of	Survey	1953		92/17	14/25	5/1	5/2	5/1		5/4	5/4
	Elev.					8000	8700	9800	8200	8000		8500	00/6
	No.					9F8	8F1	7E1	7E3	9E7		<b>6E1</b>	7E7
MISSOURI BASIN		Drainage Basin &	Snow Course *		BIG HORN RIVER (Wyoming)	Beavers Mill	Owl Creek	Ranger Creek	Tensleep R.S.	Wood River	POWDER RIVER	Sour Dough	Muddy Pass

> 0 0 5 5 0



COLUMBIA BASIN	No.	Elev.	Date	Snow			Wa	ter Co	Water Content (Inches	Inches)		> 0
			of Survey	De pth (In.)	May 1		Past Records	ecords		Average May	e Data	ed Fa
			1953	1953	1953	1952	1951	1950	1949	Avg.	%AVE.	တ
	14,41	0089	14/30	105	45.5	34.9	7.17	53.7	36.7	36.1	129	15
	13B14	5000	14/26	8	8	00	2,1	1	1	1	•	
	13B3	6750	14/30	107	45.9	1/2.1	1,8.0	0.09	1	43.1	901	
	1/ <b>V</b> /	2000	14/30	27	10.3	2.3	8.6	17.1	1	5.8	179	7
	13A1	7,700										
	15811	77500	5/1	ထ	3.7	8	1	1	1	ı	ı	
Desert Mountain	13A2	2600	5/2	36	13.3	7.9	14.8	21.7	10,8	10.1	131	17
Hell Roaring Div.	11,43	5700	5/1	\$	30.2	25.3	24.0	37.4	26.7	26.7	114	
	14,813	4530	4/20	00	8	8	1.4	ı	1	ı	ı	
	14A5	7200	4/30	7	1.6	8	1.0	7.1	•	1.1	149	_
	13A5	5250	14/30	45	17.4	10.5	19.7	26.3	12,1	6.6	180	_
North Fork Jocko	13B7	6330	5/1	26	142.9	35.1	43.4	59.6	•	35.6	118	
	13A13	3800	5/5	6	3.5	4.1	9.4	1	ı	1	1	
	13B6	7,300	5/1	Under	water	8	00	10.2	₽	ı	ı	
Spotted Bear Mt.	13B2	2000	1,/28	20	6.9	1	6.8	18,1	•	1	1	
Strawberry Lake	13B10	6500	4/30	%	40.5	39.7	27.9	58.8	35.4	7.07	100	
	13B1	6500	4/30	88	37.9	9.017	32.9	53.1	36.5	7,008	100	
	1312	3600	7/59	22	7.4	4.3	1	20.2	1	11.7	63	
	15811	3580	1/29	8	00	00	8	1	•	1	•	
Uppe r Holland Lake	1385	2000	2/6	83	34.1	34.0	33.5	ı	1	33.9	103	
	13B1	0009	5/1	101	42.2	37.6	10.01	68.1	51.1	39.8	106	17
					_							



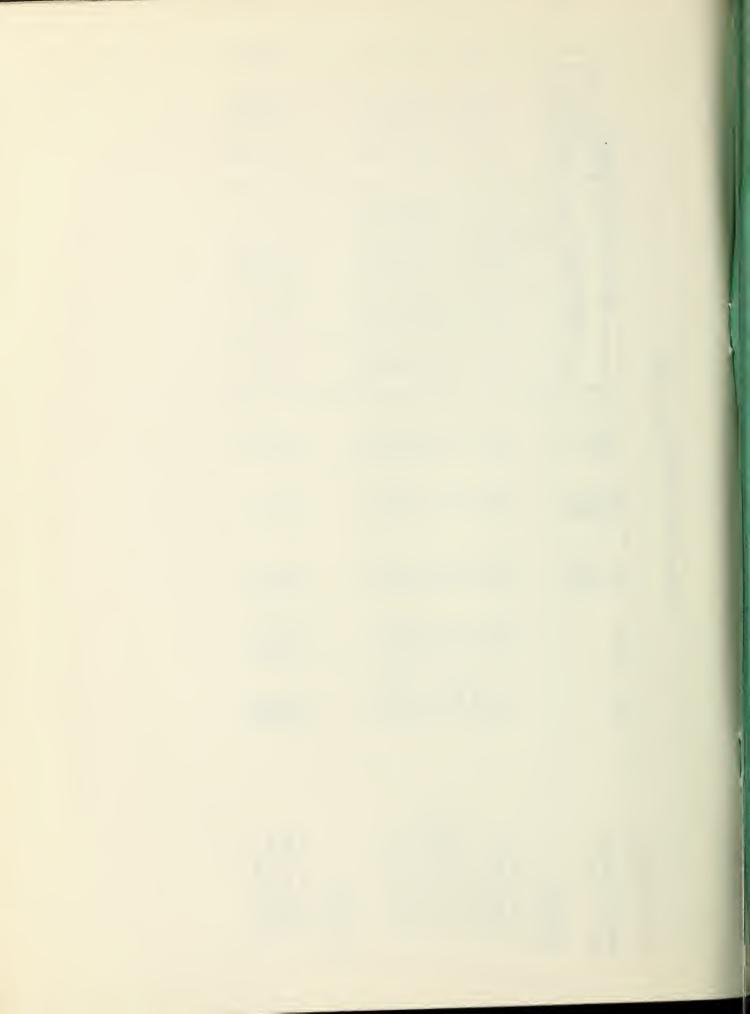
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								_				_		_				_
		ge Data	May 1	%Avg.			1	1	219	•	118	306	1	149	270	187	159	131
	ches)	Average	M	Avg.			i	1	1.6	ı	35.6	0.0	•	5.9	0°0	6.3	10.2	22.6
	Water Content (Inches)			1949				,	00	•	1	1.0	₽	6.3	ري. 0	3.5	7.1	21.1
	er Con		ecords	1951 1950	· · · · ·		1	!	7.8	1	59.6	3.8	10.2	14.2	8.9	16.3	18.8	1,5,1
	Wat		Past R	1951			1	1	3.0	1.0	45.4	6.3	00	11,2	5.1	11,2	14.8	27.5
				1952			5	3	00	00	35.1	0.3	00	7.17	8	1.7	5.9	25.9
		May	Н	1953			N		2.2	OW	42.9	6.1	water	8.8	5.4	11,8	16.2	29.8
	Snow	Depth	(In.)	1953			α	0	12	No sn	26	24	Under	31	18	35	<u>+</u>	70
	Date	of	Survey	1953			٦/٦	1/7	14/30	5/1	5/1	5/1	5/1	14/30	5/2	5/2	5/2	5/1
	Eleve						000	3	6200	27100	6330	7200	7,200	0069	6250	9800	8000	5250
	No。						וואצו	TTGCT	12 <b>c</b> 5	1308	13B7	12D1	13B6	1301	1202	1203	12ch	15B2
COLUMBIA BASIN		Drainage Besin &	Snow Course *		יי מסמי יות 4 זיי ממממיי	UPPER CLARKA FORA	Covote Hill	colore TITI	Chessman Reservoir	Lubrecht Forest	North Fork Jocko	Pipestone Pass	Rainy Lake	Stemple Pass	Tenmile, Lower	Tenmile, Middle	Tenmile, Upper	*Lookout

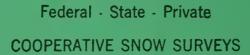


## COLUMBIA BASIN

COLUMBIA BASIN												
	No.	Elev.	Date	Snow			Water	r Content		(Inches)		<b> &gt;</b> -
Drainage Basin & Snow Course *			of Survey	Depth (In.)	May 1		Past Records	scords		Average	e Data	(U) ad
			1953	1953	1953	1952	1952 1951	1950	1949	Avg.	AVE.	, <b>5</b> 4 (
KOOTENAI												a
Blue Bird	1ha1	9089	4/30	105	45.5	34.9	4.41	53.7	36.7	36.1	127	15
Brush Creek	1/A/L	5000	4/30	27	10.3	2.3	8.6	17.1		5,8	179	10
Fernie	Canade	3500	14/30	15	3.8	8	2.1	7.7	8	2.3	160	7
New Fernie	Canada	4100	14/30	25	5.1	8	11.1	ı	1	` .	1	- 10
Marble Canyon	Canada	5000	14/30	35	14.7	7.3	19.1	16.7	10.2	13.1	112	· 0
Red Mt., Montana	15A1	0009	5/1	51	20.9	7.6	19.9	31.1	16.3	15.1	138	16
Sinclair Pass	Cana da	1500	14/30	7	1.7	8	2.1	3.5	0.0	1.2	1/12	7
Sullivan Mine	Canada	5100	5/1	56	10.2	7.2	12.9	16.6	7.9	10.9	16	-9
Gray Creek	Canada	5100	7,26	2	17.7	15.5	19.7	24.5	18.4	19.6	8	9
BITTERROOT												
Gibbons Pass Nezperce Cemp	13D2 14D2	7100	5/1	67	28.7 12.0	21.8	23.6	28.3	22.9	19.8	145	18
Nezperce Pass	נמיונ	6575	5/1	9 <sup>‡</sup> 7	16.1	12.2	13.3	18.6	12.9	2.6	166	17
TAIT CAFSON	Cutr T	7/00	2/1	J	T•1	1	1	20		0.5	520	]







Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"